



AF/2631/18
[10191/874]
6/22/04
RJ

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of:

Dietmar KELL et al.

For: METHOD AND RECEIVER FOR
GEOGRAPHICAL SELECTION OF
DIGITALLY CODED MESSAGES

Filed: July 8, 1999

Serial No.: 09/180,691

: Examiner: Kevin M. Burd

:

:

:

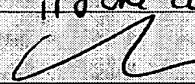
: Art Unit: 2631

RECEIVED

JUN 17 2004

Technology Center 2600

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited with the
United States Postal Service as first class mail in an envelope addressed
to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box
1450, Alexandria, VA 22313-1450 on
11 June 2004

Michelle Carniaux (Reg. No. 36,098)

APPEAL BRIEF TRANSMITTAL

SIR:

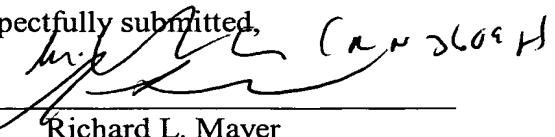
Transmitted herewith for filing in the above-identified patent application, please find
an Appeal Brief pursuant to 37 C.F.R. § 1.192(a), in triplicate.

Please charge the Appeal Brief fee of \$330.00, and any other fees that may be
required in connection with this communication to the deposit account of **Kenyon &**
Kenyon, deposit account number **11-0600**.

Appellants hereby request a one-month extension of time for submitting the Appeal
Brief. The extended period for submitting the Appeal Brief expires on June 23, 2004.
Please charge the \$110.00 extension fee and any other fee that may be required to Deposit
Account No. 11-0600. A duplicate of this Transmittal is enclosed

Respectfully submitted,

By:


Richard L. Mayer
Registration No. 22,490
KENYON & KENYON
One Broadway
New York, NY 10004
(212) 425-7200
CUSTOMER NO. 26646

Dated: 11 June 2004

06/16/2004 WABDEL1 00000068 110600 09180691

01 FC:1251

110.00 DA



10191
#19612264
[10191/874]

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: : Examiner: Kevin M. Burd
Dietmar KELL et al. :

For: METHOD AND RECEIVER FOR :
GEOGRAPHICAL SELECTION OF :
DIGITALLY CODED MESSAGES :

Filed: July 8, 1999 :

Serial No.: 09/180,691 :

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RECEIVED

JUN 17 2004

Art Unit: 2631 Technology Center 2500

I hereby certify that this correspondence is being deposited with the
United States Postal Service with sufficient postage as first class mail
in an envelope addressed to:
Mail Stop Appeal Brief - Patents

Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
on

Date 11 June 2004 Atty's Reg. # 36,098

Atty's Signature

MICHELLE M. CARNIAUX
KENYON & KENYON

APPEAL BRIEF PURSUANT TO 37 C.F.R. § 1.192(a)

SIR:

On March 23, 2004, Appellant submitted a Notice of Appeal from the final rejection of claims 13-24 contained in the Final Office Action issued by the U.S. Patent and Trademark Office (the "PTO") on October 28, 2003 in the above-identified patent application.

In accordance with 37 C.F.R. § 1.192(a), this brief is submitted in triplicate in support of the appeal of the final rejection of claims 13-24. For at least the reasons set forth below, the final rejection of claims 13-24 should be reversed.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH ("Robert Bosch"), Postfach 30 02 20, D-70442 Stuttgart, Federal Republic of Germany.

**U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874**

Robert Bosch is the assignee of the entire right, title and interest in the present application.

2. RELATED APPEALS AND INTERFERENCES

There are no interferences or other appeals related to the present application.

3. STATUS OF CLAIMS

Claims 13-24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,493,709 to Duckeck et al. (the "Duckeck patent"). Appellants appeal from the final rejection of claims 13-24. A copy of all of the pending claims is attached hereto in the Appendix.

4. STATUS OF AMENDMENTS

An Amendment After Final Office Action was filed in the PTO on January 22, 2004. In an Advisory Action dated February 5, 2004, the Examiner indicated that the Amendment would not be entered because "they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal."

5. SUMMARY OF THE INVENTION

The present invention relates to a method for geographical selection of digitally coded messages which are emitted from several transmitters and contain location data that are compared, in receivers, to selection data that are dependent on the respective position of the receivers; and a receiver having a device for the selection of digitally coded messages. Specification, page 1, lines 1-6. In the method according to the present invention, this object is achieved in that the transmitters additionally emit selection data which characterizes their respective transmission regions and which, in the receiver, are compared to location data contained in the messages. Specification, page 3, lines 9-13.

As illustrated in, e.g., Fig. 2a, in a first embodiment of the method according to the present invention, provision is made for the selection data to be location codes of areas which are defined for the coding and decoding of messages and fall at least partially in the transmission region. The location codes, hereinafter also called area codes (see, e.g., element D), can be used directly by the receiver as a selection criterion, since all the

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

locations defined for the coding and decoding of messages are referenced to such location codes. In other words, the only messages which pass through the filter are those whose primary or secondary location indication is located inside the territory defined by the area code. Specification, page 4, lines 13-24.

A second embodiment of the method according to the present invention consists in the fact that the selection data are coordinates (see, e.g., element C of Fig. 2b) and radii (see, e.g., element D of Fig. 2b) of the transmission regions. In this context, the radius D represents, in simplifying fashion, the range of the respective transmitter. In order to use these selection data in the receiver, the location coordinates for each location code must also be stored in the location list. Since this is also a prerequisite for a graphic depiction of the traffic situation, such data are often already contained in the location list, and can additionally be used for the method according to the present invention.

Specification, page 3, line 26 to page 4, line 3.

In accordance with a further embodiment of the method according to the present invention, however, it is also possible for a group of transmitters to emit identical selection data in each case. A development of the method according to the present invention consists in the fact that the selection data and reference data for the selection data are transmitted in system messages of a data stream containing the digitally coded messages. Specification, page 4, lines 16-24.

Where it is possible to both transmit area codes and to transmit coordinates and radii, in an advantageous embodiment of this development provision is made for additionally transmitting in the first data block the information concerning the type of selection data, by way of a bit which states whether the selection data consist of location codes of areas, or coordinates and radii. See, e.g., Figs. 2a and 2b (CID). In the case where area codes are transmitted, it is advantageous additionally to transmit in the first data block an indication of how many location codes of areas are to follow. In this context, a location code of an area can be transmitted in at least one further data block. For a selection datum consisting of radius and coordinates, the development of the method according to the present invention can be embodied in such a way that the radius is transmitted in the first data block, and the coordinates in a further data block.

Specification, page 6, lines 3-20.

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

In a receiver according to the present invention having a device for the selection of digitally coded messages which are emitted by several transmitters, contain location data, and are selected in the receiver on the basis of selection data that depend on the respective position of the receiver, the object of the present invention is achieved in that the receiver furthermore has a device for the reception of selection data which are emitted by transmitters and which characterize the transmission region of the respective transmitter, and a device for comparing the selection data to the location data contained in the messages. Specification, page 6, line 22 to page 7, line 6.

6. ISSUES

A. Whether claims 13-24 which stand rejected under 35 U.S.C. § 102(b) are patentable over the Duckeck patent.

7. GROUPING OF CLAIMS

Issue A

Group I: Claims 13, 14, 17, 23, and 24

Group II: Claim 15

Group III: Claim 16

Group IV: Claims 18 and 21

Group V: Claim 19

Group VI: Claim 20

Group VII: Claim 22

Appellants respectfully submit that the claims of each Group stand or fall together with the other claims of that Group. However, each Group of claims does not stand or fall together with any other Group of claims.

8. ARGUMENTS

Issue A

Group I

Claims 13, 14, 17, 23 and 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that the Duckeck patent

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

does not anticipate the subject matter of any of claims 13, 14, 17, 23, and 24 for at least the following reasons.

Claims 13 and 23 recite the following:

A method for geographically selecting digitally coded messages which are emitted from a plurality of transmitters, the digitally coded messages containing location data, the method comprising the steps of:

transmitting, via each respective one of the transmitters, *at least one message containing selection data indicative of a respective transmission region of the respective one of the transmitters*; and

comparing, in a receiver, the location data to the digital selection data for selecting the digitally coded messages. Claim 13.

A receiver comprising:

a device configured to receive at least one message containing respective selection data by each one of a plurality of transmitters, *each respective selection data indicating a respective transmission region of the respective one of the transmitters*,

wherein a device configured to select digitally coded messages which are emitted by the transmitters as a function of the selection data, the digitally coded messages containing location data, and

wherein *the device is configured to compare the selected selection data to the location data.* Claim 23.

Claims 14 and 17 depend from claim 13, and claim 24 depends from claim 23. In the Final Office Action, dated October 28, 2003, the Examiner apparently relies on the frequency data and coordinate data transmitted from the transmitters of the Duckeck patent as disclosing Appellants' recited "selection data." Respectfully, as pointed out by the Examiner, the frequency data and coordinate data is used by the radio receiver to determine the location of the receiver. This is not, however, *indicative of a transmission region*, as recited in claims 13 and 23. The coordinate data, for example, merely indicates the location of the transmitter. Moreover, claims 13 and 23 recite that the *selection data (which was transmitted by a transmitter) is compared to the location data in a message for selecting the message.* In contrast, in the Duckeck patent, the frequency data and the coordinate data (i.e., the elements upon which the Examiner relies with respect to Appellants' recited selection data) is not compared to location data in a message for selecting a message. Instead, in the Duckeck patent, the frequency data and coordinate data are used by the receiver to determine the location of the receiver.

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

The Duckeck patent also describes that "additional information" 18 may be transmitted. This additional information contains descriptions of "validity ranges" of location-specific messages. See, e.g., col. 4, ll.7-10. However, the validity ranges do not indicate a transmission region; they indicate only additional cities or towns for which the traffic message may be relevant. See, e.g., col. 4, ll. 60-66. In the example described in the Duckeck patent, the traffic message states "danger: driver driving in wrong direction on Highway A8 between Augsburg and Ulm." Col. 4, ll. 54-56. The text section "Highway A8, Augsburg and Ulm" correspond to the information 18. Thus, the information 18 provides an indication of where the traffic message is relevant, but does not indicate in any regards the transmission region of the transmitter, as recited in the present claims.

In accordance with an example embodiment of the present invention, described in the Specification, traffic messages emitted by radio, containing location data, are selected on the basis of selection information present in the receiver. In this context, the selection information present in the receiver is formed from regional information which is also emitted by radio transmitters. In this context, the regional information emitted by the radio transmitters indicates, in each case, the transmitting region covered by the radio transmitters, or, in other words, the regions in which the radio transmitters are receivable. The selection of the traffic messages takes place according to whether location data contained in them lie inside such a transmitting region.

The Duckeck patent takes a different approach. In the Duckeck patent, the transmission frequency and the coordinates of the transmitter are transmitted and stored in the receiver. If data (e.g., radio programs) are identically emitted by several radio transmitters, and if, furthermore, several of these radio transmitters are receivable at the current receiver location, the frequency data and the coordinate data of these additional receivable radio transmitters are also stored. From the location coordinates of the radio transmitters receivable at the receiver location, a resulting transmitter location is calculated by averaging. This information is used to determine, among other things, to which station the radio should be tuned for subsequent traffic messages.

The Duckeck patent also recognized that the location data of the messages usually concern only one certain location, and therefore the agreement of the location data

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

of the traffic message with location of the transmitter is improbable. Thus, the Duckeck patent provides "validity ranges," i.e., information which provides an indication of the areas in which the traffic messages may be relevant. This information may be used to filter traffic messages.

Considerably different technical effects are achieved by the two approaches. In the present Specification, it is sufficient if the radio transmitter notifies the receiver of its transmission region. For this purpose, example message formats such as those shown in Figs. 2a and 2b may be utilized. According to those formats, the transmission region can be specified by location coordinates having a circumference defined by a radius (see, e.g., claims 15, 19 and 22), or, alternatively, by a code which represents a region in a data bank in the receiver. This transmission region information may be transmitted "decoupled" from the actual traffic messages. In particular, it is not necessary to transmit the transmission region information together with each traffic message.

In the Duckeck patent, with each location information, the cities or towns for which the message may be relevant are also transmitted. This approach would use more transmission capacity than that described in the present Specification.

For at least the foregoing reasons, the Duckeck patent does not anticipate claims 13, 14, 17, 23 or 24. Reversal of the Examiner's rejection of claims 13, 14, 17, 23 and 24 is, therefore, requested.

Group II

Claim 15 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that claim 15 is not anticipated by the Duckeck patent, for at least the following reasons.

As an initial matter, claim 15 depends from 13. Thus, the arguments presented above in connection with claim 13 and the Duckeck patent apply equally to claim 15.

Moreover, claim 15 recites the following:

wherein the selection data includes coordinates and a radius of the respective transmission region of the respective one of the transmitters.

As regards to this feature of claim 15, the Examiner apparently relies on the "validity

**U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874**

"ranges" of the Duckeck patent as disclosing Appellants' recited "radius of the respective transmission region." Respectfully, the validity ranges do not indicate a transmission region, nor does they include the radius of a transmission region; they indicate only additional cities or towns for which the traffic message may be relevant. See, e.g., col. 4, ll. 60-66. In the Duckeck patent, information 18 may include validity ranges. In the example described in the Duckeck patent, the traffic message states "danger: driver driving in wrong direction on Highway A8 between Augsburg and Ulm." Col. 4, ll. 54-56. The text section "Highway A8, Augsburg and Ulm" correspond to the information 18. Thus, the information 18 provides an indication of where the traffic message is relevant, but does not indicate in any regards the radius of the transmission region of the transmitter, as recited in claim 15.

For at least the foregoing reasons, the Duckeck patent does not anticipate claim 15. Reversal of the Examiner's rejection of claim 15 is therefore requested.

Group III

Claim 16 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that the Duckeck patent does not anticipate claim 16, for at least the following reasons.

As an initial matter, claim 16 depends from claim 13. Accordingly, the arguments presented above in connection with claim 13 and the Duckeck patent apply equally to claim 16.

Moreover, claim 16 recites the following:

wherein a particular group of the transmitters emits identical data to the selection data.

As noted above, as regards Appellants' recited "selection data," the Examiner apparently relies on the "frequency data" and "coordinate data" described in the Duckeck patent. Respectfully, the Duckeck patent does not describe that a group of transmitters emits identical data to the frequency data and coordinate data.

Moreover, as regards this feature of claim 16, the Examiner merely contends that "all of the transmitters transmit coordinate and radius information." First, it is submitted that the Duckeck patent does not describe transmitting "radius information."

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

First, the section of the Duckeck patent upon which the Examiner relies as "radius information" is, instead, validity ranges which describes an indication of where the traffic message is relevant. Second, nowhere in the Duckeck patent is it described that any group of transmitters transmit "identical" information.

For at least the foregoing reasons, it is respectfully submitted that the Duckeck patent does not anticipate claim 16. Reversal of the Examiner's rejection of claim 16 is, therefore, requested.

Group IV

Claims 18 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that claims 18 and 21 are not anticipated by the Duckeck patent, for at least the following reasons.

As an initial matter, claim 18 depends from claim 13, and claim 21 depends from claim 18. Thus, the arguments presented above in connection with claim 13 and the Duckeck patent apply equally to claims 18 and 21.

Moreover, claim 18 recites the following:

transmitting further data in a particular data block of the data stream, the further data including:
 an identifier which indicates that the selection data is being transmitted,
 a particular number of a location list for decoding the digitally coded messages in the receiver, and
 particular data relating to a type of the selection data.

In rejecting claim 18, the Examiner merely asserts "Regarding claims 17 and 18, the transmitters also transmit traffic information corresponding to a particular region." Respectfully, the Examiner has not addressed any of the language of claim 18. Claim 18 recites specific types of data which are further transmitted, none of which is described in the Duckeck patent.

For at least the foregoing reasons, it is submitted that the Duckeck patent does not anticipate claims 18 or 21. Reversal of the Examiner's rejection of claims 18 and 21 is, therefore, requested.

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

Group V

Claim 19 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that claim 19 is not anticipated by the Duckeck patent, for at least the following reasons.

Claim 19 depends from claim 18. Accordingly, the arguments presented above in connection with claim 19 and the Duckeck patent apply equally to claim 19.

Moreover, claim 19 recites the following:

The method according to claim 18, wherein the selection data includes coordinates and a radius of the respective transmission region of the respective one of the transmitters, and further comprising the step of:

transmitting the particular data in the particular data block using a predetermined bit, the predetermined bit indicating whether the selection data includes one of:
the location codes of the particular areas, and
the coordinates and the radius.

As set forth above in connection with claim 15, the Duckeck patent does not describe transmission of selection data which includes "coordinates and a radius of the respective transmission region." Also, the Duckeck patent does not describe "transmitting the particular data . . . using a predetermined bit, the predetermined bit indicating whether the selection data includes" location codes or coordinates and radius; nor does the Examiner even address this language of claim 19.

For at least the foregoing reasons, it is submitted that the Duckeck patent does not anticipate claim 19. Reversal of the Examiner's rejection of claim 19 is requested.

Group VI

Claim 20 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that the Duckeck patent does not anticipate claim 20, for at least the following reasons.

As an initial matter, claim 20 depends from claim 19. Accordingly, the arguments presented above in connection with claim 19 and the Duckeck patent apply equally to claim 20.

Moreover, claim 20 further recites:

transmitting, in the particular data block, data

**U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874**

indicative of a particular number of the location codes to be transmitted.

Respectfully, the Duckeck patent does not describe that this type of data is transmitted; nor does the Examiner even address this language of claim 20.

For at least the foregoing reasons, it is respectfully submitted that the Duckeck patent does not anticipate claim 20. Reversal of the Examiner rejection of claim 20 is, therefore, requested.

Group VII

Claim 22 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the Duckeck patent. It is respectfully submitted that the Duckeck patent does not anticipate claim 21, for at least the following reasons.

Claim 22 depends from claim 18. Thus, the arguments presented above connection with claim 18 apply equally to claim 22.

Moreover, claim 22 further recites:

wherein the selection data includes coordinates and a radius of the respective transmission region of the respective one of the transmitters, and

wherein the respective one of the transmitters transmits the radius in the particular data block, and transmits the coordinates in a further data block.

As discussed above in connection with claim 15, the Duckeck patent does not describe transmission of selection data which includes "coordinates and a radius of the respective transmission region."

For at least the foregoing reasons, it is respectfully submitted that the Duckeck patent does not anticipate claim 22. Reversal of the Examiner's rejection of claim 22 is, therefore, requested.

CONCLUSION

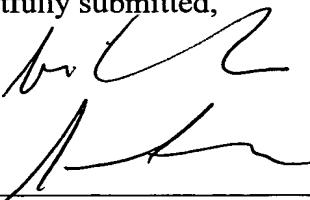
For at least the reasons indicated above, Appellants respectfully submit that the art of record does not teach or suggest Appellants' invention as recited in the claims of

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

the above-identified application. Accordingly, it is respectfully submitted that the invention recited in the claims of the present application is new, non-obvious and useful. Reversal of the Examiner's rejections of the claims is therefore respectfully requested.

Respectfully submitted,

By:


Richard L. Mayer
Registration No. 22,490

KENYON & KENYON
One Broadway
New York, NY 10004
(212) 425-7200

Dated: 11 June 2001



U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

RECEIVED

JUN 17 2004

Technology Center 2600

APPENDIX

1-12. (Canceled).

13. (Previously Presented) A method for geographically selecting digitally coded messages which are emitted from a plurality of transmitters, the digitally coded messages containing location data, the method comprising the steps of:

transmitting, via each respective one of the transmitters, at least one message containing selection data indicative of a respective transmission region of the respective one of the transmitters; and

comparing, in a receiver, the location data to the digital selection data for selecting the digitally coded messages.

14. (Previously Presented) The method according to claim 13, wherein the selection data includes location codes of particular areas, the particular areas being defined for coding and decoding of the digitally coded messages and being positioned at least partially in the respective transmission region of the respective one of the transmitters.

15. (Previously Presented) The method according to claim 13, wherein the selection data includes coordinates and a radius of the respective transmission region of the respective one of the transmitters.

16. (Previously Presented) The method according to claim 13, wherein a particular group of the transmitters emits identical data to the selection data.

17. (Previously Presented) The method according to claim 14, further comprising the step of:

transmitting reference data for the selection data, wherein the reference data and the selection data are transmitted in system messages of a data stream which includes the digitally coded messages.

18. (Previously Presented) The method according to claim 17, further comprising the step

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

of:

transmitting further data in a particular data block of the data stream, the further data including:

an identifier which indicates that the selection data is being transmitted,
a particular number of a location list for decoding the digitally coded messages in the receiver, and
particular data relating to a type of the selection data.

19. (Previously Presented) The method according to claim 18, wherein the selection data includes coordinates and a radius of the respective transmission region of the respective one of the transmitters, and further comprising the step of:

transmitting the particular data in the particular data block using a predetermined bit, the predetermined bit indicating whether the selection data includes one of:

the location codes of the particular areas, and
the coordinates and the radius.

20. (Previously Presented) The method according to claim 19, further comprising the step of:

transmitting, in the particular data block, data indicative of a particular number of the location codes to be transmitted.

21. (Previously Presented) The method according to claim 18, wherein at least one of the location codes is transmitted in at least one particular data block.

22. (Previously Presented) The method according to claim 18,

wherein the selection data includes coordinates and a radius of the respective transmission region of the respective one of the transmitters, and

wherein the respective one of the transmitters transmits the radius in the particular data block, and transmits the coordinates in a further data block.

U.S. PAT. APP. SERIAL NO. 09/180,691
ATTORNEY DOCKET NO. 10191/874

23. (Previously Presented) A receiver, comprising:

a device configured to receive at least one message containing respective selection data transmitted by each one of a plurality of transmitters, each respective selection data indicating a respective transmission region of the respective one of the transmitters,

wherein the device is configured to select digitally coded messages which are emitted by the transmitters as a function of the selection data, the digitally coded messages including location data, and

wherein the device is configured to compare the selection data to the location data.

24. (Previously Presented) The receiver according to claim 23,

wherein, when overlapping data of the selection data is being received by the device, the device selects the digitally coded messages as a further function of an intersection of the received selection data, and

wherein the data is transmitted by a group of the transmitters.